

AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/DE 2004/001980
filed on September 7, 2004.

[0000.6] BACKGROUND OF THE INVENTION

Please replace paragraph [0001] with the following amended paragraph:

[0001] ~~Prior Art~~ **Field of the Invention**

Please replace paragraph [0002] with the following amended paragraph:

[0002] The invention relates to [[a]] **an improved** piezoelectric actuator, for example for actuating a mechanical component[[.]] ~~as generically defined by the preamble to the main claim~~ **such as a switching valve in a fuel injector system.**

Please add the following new paragraph after paragraph [0002]:

[0002.5] Description of the Prior Art

Please replace paragraph [0003] with the following amended paragraph:

[0003] ~~For example,~~ DE 199 28 189 A1 has disclosed that using the so-called piezoelectric effect, a piezoelectric element for controlling the needle stroke of a valve or the like can be composed of a material with a suitable crystalline structure. The application of an external electrical voltage causes a mechanical reaction of the piezoelectric element, which, depending on the crystalline structure and the regions to which the electrical voltage is applied, produces a compression or traction in a predeterminable direction.

Applicant: Bertram SUGG
Docket No. R.306628
Preliminary Amdt.

Page 3, please replace paragraph [0008] with the following amended paragraph:

[0008] ~~Advantages of the Invention~~

SUMMARY AND ADVANTAGES OF THE INVENTION

Please replace paragraph [0009] with the following amended paragraph:

[0009] The piezoelectric actuator described ~~at the beginning above~~ is, as **previously** mentioned ~~above~~, comprised of a multilayered structure of piezoelectric layers and internal electrodes situated between the layers in a piezoelectrically active region and, in order to be triggered with an electrical voltage, is provided with a contacting of the internal electrodes that alternates from layer to layer. The layer structure of the piezoelectric actuator also includes at least one inactive region, e.g. a bottom part and/or top part in the form of a covering packet, at one end or within the active region in terms of its overall installation length.

Page 4, please replace paragraph [0013] with the following amended paragraph:

[0013] ~~Drawings~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0014] with the following amended paragraph:

[0014] An exemplary embodiment of the piezoelectric actuator according to the invention will be explained in detail **herein below**, in conjunction with the drawings, **in which:** [[.]]

Page 5, please replace paragraph [0017] with the following amended paragraph:

[0017] Fig. [[2]] 3 shows a schematic wiring diagram of the capacitances occurring in the piezoelectric actuator when the inactive regions are connected to internal electrodes of the active region with different polarities, and

Please replace paragraph [0018] with the following amended paragraph:

[0018] Fig. [[3]] 4 shows a curve of the parasitic capacitances with certain proportions of the layer thicknesses of the inactive regions.

Please replace paragraph [0019] with the following amended paragraph:

[0019] ~~Description of the Exemplary Embodiments~~

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Page 6, please replace paragraph [0023] with the following amended paragraph:

[0023] The ceramic in the active region A has a dielectric constant of ϵ_{33} . The dielectric constant ϵ'_{33} of the region B or C is selected in accordance with the relationship $\epsilon'_{33} < [[<]]$ ϵ_{33} . The ceramic in regions B and C according to Fig. 1 is then selected or modified so that in any case, the dielectric constant ϵ'_{33} is minimized.

Page 7, please add the following new paragraph after paragraph [0029]:

[0030] The foregoing relates to a preferred exemplary embodiment of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.